## Abstract

The present invention relates to a method for producing a modified propylene-based polymer containing modifying a propylene-based polymer by a radical initiator and an organic acid, a modified propylene-based polymer obtained by the method, and an adhesive composition containing the modified propylene-based polymer. The propylene-based polymer is a propylene homopolymer satisfying the conditions of (a) mmmm = 20 to 60 mol%, (b)  $[rrrr/(1-mmmm)] \le 0.1$ , (c) rmrm > 2.5 mol%, (d)  $mmxrr/(mr)^2 \le 2.0$ , and (e) the weight ratio (W25) of components eluted at 25°C or lower in a temperature programmed chromatography is 20 to 100% by weight, or a propylene copolymer satisfying the condition of (h) the stereoregularity index (P) obtained by  $^{13}C-NMR$  measurement is 55 to 90 mol%.

The modified propylene-based polymer of the invention can make a polyolefin, etc. more adhesive, stronger, or flexible, to be useful for a high-adhesive sealant or an polyolefin with increased compatibility to an inorganic filler, etc., particularly as a resin for a hot-melt adhesive.